

PROJECT MANAGEMENT

SURVEYING

CIVIL

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SEWER & WATER

TRAFFIC

TRAFFIC IMPACT STATEMENT

PROPOSED UP-GRADING OF EXISTING RECYCLING FACILITY

50 WYLLIE ROAD, KEMBLA GRANGE

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KF110816 / D

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1.0 INTRODUCTION

K.F. Williams & Associates Pty Ltd have been commissioned by Bi Corp Pty Ltd to undertake a traffic impact study for the proposed expansion of their Re-cycling Facility at 50 Wyllie Road, Kembla Grange.

A Development Application has been lodged with Wollongong City Council for the upgrading of the site which will increase the re-cycling capacity from 30,000t/pa to 230,000t/pa. The development would be classified BY THE State Environmental Planning Policy (Infrastructure) 2007 under schedule 3, as being required to be referred to the RMS.

The aim of this report is to investigate:

- The existing site conditions & traffic generation rates
- The existing local traffic infrastructure
- Review on-site conditions and upgrading of facilities to cater for the proposed increased production.
- Investigate predicted traffic generation rates & future traffic routes.
- Review Councils future road network strategy & access impacts the traffic generation may have on this infrastructure.
- Review impact on adjacent roads due to construction.

The application has now been referred to The Department of Planning & Infrastructure who have requested additional information be provided (refer Appendix F). This report has now been updated to review these requirements.

2.0 LOCATION OF PROPOSED DEVELOPMENT

The development is located in the south western Wollongong suburb of Kembla Grange, a Wollongong City Council suburb, 8km south west of Wollongong central business district and 4.5km North West of Dapto central business district.

The site has road frontage off Wyllie Road with an area of 21.72ha and is described as Lot 10 DP.878167 – 50 Wyllie Road, Kembla Grange.

The site is bisected into two (2) zones i.e.

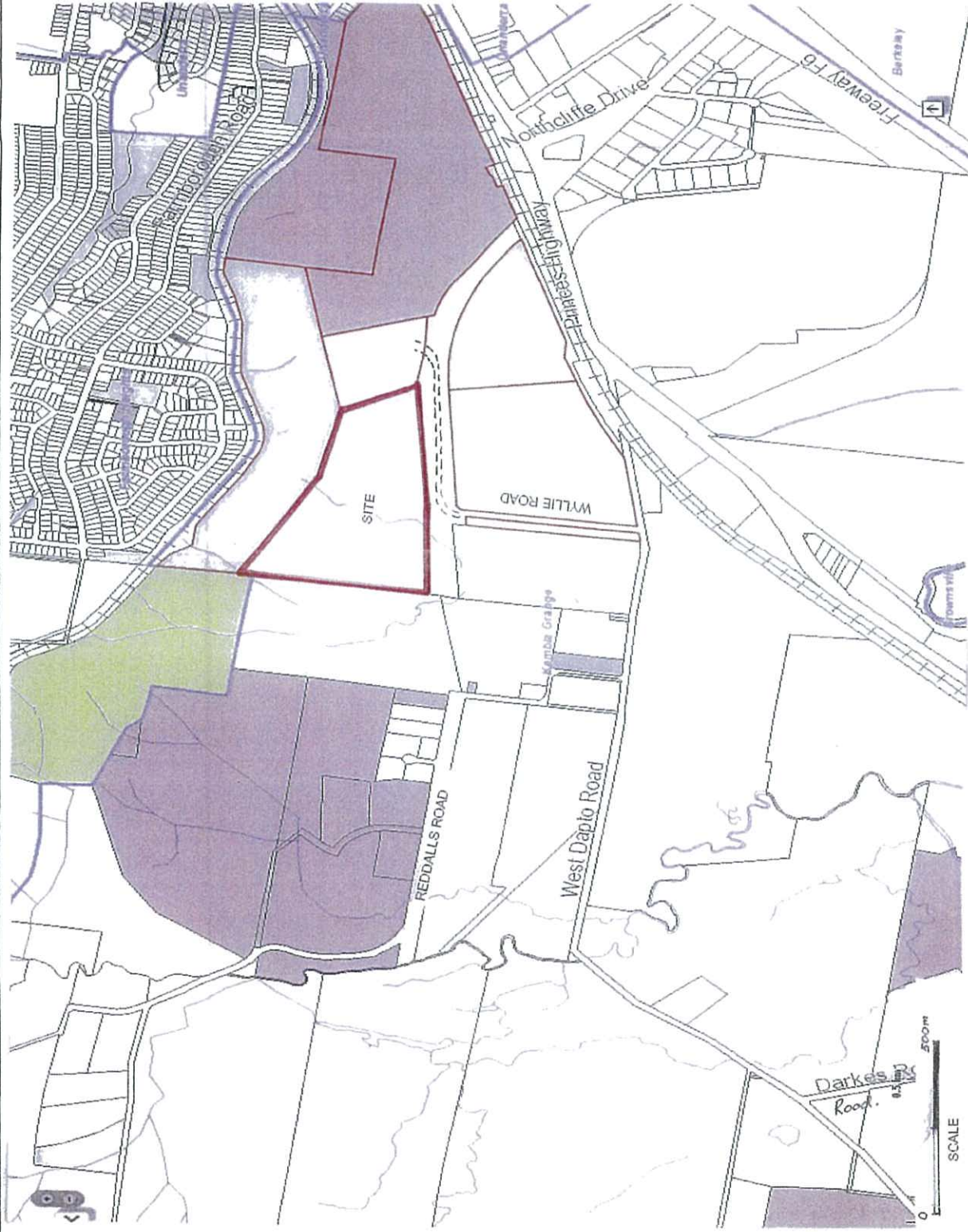
IN2 – Light Industrial – south East Corner (6.1ha)

RE2 – Private Recreation – North/North West area (15.62ha)

The Light Industrial area is presently occupied by a re-cycling plant. The remainder of the site is vacant with scattered vegetation.

For plan showing site locations and adjacent road layout refer KF110816/T01 attached.

DO NOT SCALE



Revision	Amendment or reason for issue	Issue date	Drawn by	Authorised

KFW
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**50 WYLLIE RD
KEMBLA GRANGE
EXISTING ROAD NETWORK**

Project No.	KF110816
Drawing No.	T01
Sheet	1 of 1

3.0 EXISTING SITE CONDITIONS

3.1 Existing Roads

The site has direct access onto Wyllie Road. Wyllie Road is a long cul-de-sac which connects West Dapto Road to the site, other adjacent Industrial land, Recreational land and Wollongong Lawn Cemetery.

Present sites utilizing Wyllie Road are the Wollongong Lawn Cemetery, minor sports fields and the current development site.

A Development Approval for a 38 lot Industrial subdivision was approval on Lot 2 DP.792692 (2005/1926) but this approval has not been acted on.

Wyllie Road has a 7m bitumen pavement with grass verges, the posted speed limit is 80km/hr.



Wyllie Road Viewed towards West Dapto Road

Present traffic generation would be approx. 500v/day.

Wyllie Road has been widened to have a 12.8m pavement and K & G at the intersection with West Dapto Road. West Dapto Road is a main through road with 3.3m wide lanes in either direction and 1.7m to 2.3m wide sealed shoulders.



West Dapto Road

A traffic count undertaken by Wollongong City Council in July 2012 indicated an AADT (7 days) of 4189 vehicles (refer Appendix A for count data).

West Dapto Road intersects with the Princes Highway 0.6km north east of the intersection with Wyllie Road. The Princes Highway at this location has an approx. AADT of 14,000 vehicles. This intersection is currently being upgraded with Traffic Lights and Right Turn/Left Turn lanes being added.

3.2 Existing Traffic Generation

The majority of the land serviced by Wyllie Road is presently undeveloped. Present traffic generation is restricted to the existing re-cycling centre, Wollongong Lawn Cemetery/religious centre and a small playing field.

The current re-cycling facility employs 8 people and caters for 30,000t/pa. The centre operating hours are 6am to 6pm – Monday to Saturday (i.e. 6 days/week – 288 days per year). The majority of material is processed Monday to Friday with Saturday only accounting for 25% of the daily production rate.

Based on this & discussions with company Management table 1 below sets out the existing traffic generation from the re-cycling centre.

Table 1

30,000t/pa – Traffic Generation/Weekday i.e. 120t/days			
Description General	Vehicle Types	Number	Total Equivalent Movements *
Employees 8	Standard Car	4	8
Visitors 4	Standard Car	4	8
Machinery/deliveries	Single unit Trucks	4	12
Material Delivery	Standard car/utes	24	48
	Single unit Trucks	6	18
	Trucks/Dogs	6	48
Material Sales	Standard car/utes	24	48
	Single unit Trucks	6	18
	Trucks/Dogs	6	48
		Total	260/day

* Equivalent Movements Base on

Car/Utility/Car Trailer = 1
Single unit truck = 1.5
Truck/Dog or Semi = 4

Current deliveries/sales are estimated to be 80% from the north (Wollongong/Northern suburbs) & 20% from the south (Dapto/Shellharbour).

Vehicle generation from the Wollongong Lawn Cemetery would be concentrated in platoons with average 10/15 vehicles at a time.

The current estimated AADT for Wyllie's Road is 500 vehicles which includes the current development.

4.0 DESCRIPTION OF PROPOSED DEVELOPMENT

The site is presently utilized to re-cycle 30,000t of material per year. Materials to be re-cycled include discarded concrete, bricks, bitumen, rocks/stones, soil, general solid waste, metal, timber and general green waste. Material is delivered to site in vehicles ranging in size from small car trailers/utilities (0.5 tonne loads) to large truck/dog combinations (30 tonne loads).

Materials are processed on-site and sold to clients, delivery vehicles range in size from 0.5 tonnes to 30 tonnes.

This proposal is to upgrade the facility progressively over the next 5 years from 30,000t/pa to 230,000t/pa. The site will operate 7 days/week for 48 weeks pa.

For proposed site layout plan refer KF110816/C10/J-Appendix B.

The number of employees (presently 8 on-site) will progressively increase to 40 people, these will include the following.

- Office Staff
- Weighbridge operators
- Mechanics/Welders
- Truck/Loader operators
- Labours
- Environmental Engineer
- Safety Officer
- General Manager
- Sales rep/Estimators

For predicted increase in traffic generation rates refer Section 6.

5.0 WEST DAPTO RELEASE AREA – FUTURE ROAD UPGRADING

The site is at the northern edge of the current West Dapto Release area, the future road network is described in Wollongong City Council DCP2009-Chapter D16. An extract from the plan showing the proposed road network and future intersection treatment with the site is included in Appendix C.

The intersection of West Dapto Road & the Princes Highway is currently being upgraded to have traffic lights installed, this is the first stage of the plan. As this intersection becomes saturated and begins to impact on the adjacent railway level crossing, Wyllie Road will be upgraded to 2 lanes in either direction and extended to meet Northcliffe Drive. The timing of this extension is not currently known, however Council estimate it will be in place by 2036.

Council has provided traffic data which predicts that Northcliffe Drive extension at this time will have an AADT of 24,989 vehicles (refer Appendix C).

Wyllie Road will become the future northern link into the West Dapto release area, K F Williams & Associates Pty Ltd plan KF110816-T02 shows the road network adjacent to the site and the land zoning as currently proposed.

6.0 PREDICTED TRAFFIC GENERATION

The predicted traffic generation is based on the current operation rates and hence extrapolated to produce the future traffic movements. The RMS Guide to Traffic Generating developments has no specific guidelines for re-cycling plants and hence rates based on the existing development seem appropriate.

The majority of waste is generated from building sites which operate Monday to Friday, Saturday & Sunday operations seem to be restricted to small property owners, and tonnage rates are generally 25% of the Monday to Friday rates.

The site operating hours will be 6am to 6pm, Cartage volumes are based on the following distributions.

10% - 0.5t loads (i.e. Utilities/trailers)

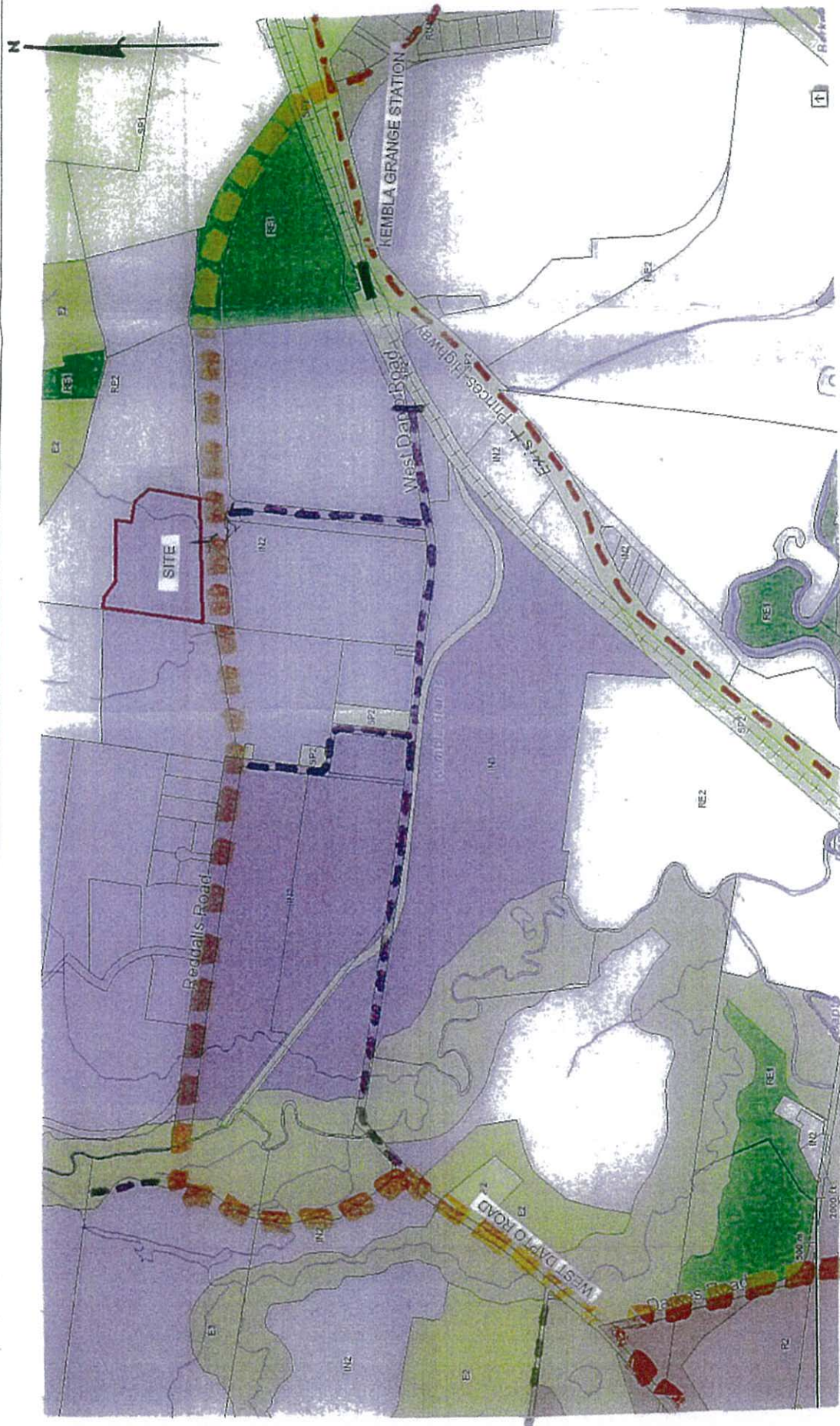
20% - 1.0t to 8t loads (single unit truck) (average 3t loads)

70% - 12t to 30t loads (large trucks/truck/dog combination/semi-trailers (average 15t loads).



Typical Single Unit Truck

NOT TO SCALE



- PROPOSED 4 LANE ROADS
- PROPOSED 2 LANE ROADS

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<p>50 WYLLIE RD KEMBLA GRANGE PROPOSED ROAD NETWORK - ZONING</p>		<p>Client: 50 WYLLIE RD Project Manager: D. DOWDY Author: D. DOWDY Check: D. DOWDY Approved: D. DOWDY</p>		<p>Scale: 1:1000 Drawing Status: Final</p>
<p>Prepared: August 2014 Date at Issue: August 2014 Project Name: 50 WYLLIE RD Project No: KF10816 Author: D. DOWDY Check: D. DOWDY Approved: D. DOWDY</p>	<p>Drawn: D. DOWDY Checked: D. DOWDY Approved: D. DOWDY</p>	<p>Project No: KF10816 Drawing No: T02</p>	<p>Client: 50 WYLLIE RD Project Manager: D. DOWDY Author: D. DOWDY Check: D. DOWDY Approved: D. DOWDY</p>	<p>Scale: 1:1000 Drawing Status: Final</p>



Typical Truck/Dog Combination

6.1 100,000TONNES / PA

Table 2 below outlines the predicted traffic generation rates when production increases to 100,000 t/pa.

Table 2

100,000t/pa – Predicted Traffic Generation/Weekday i.e. 379t/day			
Description	Vehicle Type	Number	* Total equivalent Movement
General Employees 18 Visitors 8 Deliveries	Standard Cars	9	18
	Standard Cars	8	16
	Single Unit Trucks	6	18
Material Delivery	Standard car/utes	76	76
	Single unit Truck	25	38
	Truck/Dogs	18	72
Material Sales	Standard car/utes	76	76
	Single unit Trucks	25	38
	Truck/Dogs	18	72
		Total	424/day

* Total Standard Vehicles Equivalent numbers based on:

Car/Utility/Car Trailer = 1

Single unit truck = 1.5

Truck/Dog or semi = 4

The total daily traffic generation in standard vehicle unit equivalents is 424/day. Based on 10% peak hour rate this is 42 vehicles/peak hour.

6.2 150,000tonnes/pa

Table 3 below outlines the predicted traffic generation rates when production increases to 150,000t/pa.

Table 3

150,000t/pa – Predicted Traffic Generation/Weekday i.e. 568t/day			
Description	Vehicle Type	Number	* Total Equivalent Movement
General Employees 18 Visitors 8 Deliveries	Standard Cars	13	26
	Standard Cars	12	24
	Single Unit Trucks	8	24
Material Delivery	Standard car/utes	114	114
	Single axil Truck	38	57
	Truck/Dogs	26	104
Material Sales	Standard car/utes	114	114
	Single axil Trucks	38	57
	Truck/Dogs	26	104
		Total	624/day

* Total Standard Vehicles Equivalent numbers based on:

Car/Utility/Car Trailer = 1
Single axil truck = 1.5
Truck/Dog or semi = 4

The total daily traffic generation in standard vehicle unit equivalents is 624/day. Based on 10% peak hour rate this is 62 vehicles/peak hour.

6.3 230,000tonne/pa

Table 4 below outlines the predicted traffic generation rates when production increases to 230,000t/pa.

Table 4

230,000t/pa – Predicted Traffic Generation/Weekday i.e. 871t/day			
Description	Vehicle Type	Number	* Total Equivalent Movement
General Employees 40 Visitors 16 Deliveries	Standard Cars	20	40
	Standard Cars	16	32
	Single Unit Trucks	12	36
Material Delivery	Standard car/utes	174	174
	Single unit Truck	58	87
	Truck/Dogs	40	160
Material Sales	Standard car/utes	174	174
	Single unit Trucks	58	87
	Truck/Dogs	40	160
	Total		950/day

* Total Standard Vehicles Equivalent numbers based on:

Car/Utility/Car Trailer = 1

Single axil truck = 1.5

Truck/Dog or semi = 4

The total daily traffic generation in standard vehicle unit equivalents is 950/day. Based on 10% peak hour rate this is 95 vehicles/peak hour.